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From the Farmer's Encyclopedia and Dictionary of Rural Affairs

ASHES, THEIR CONSTITUENTS AND ACTION.

Ashes (Goth. *atzgo, azgo*, dust; Sax. *æsca*; Dutch and Germ. *asche*; Su. Goth. *aska*). "*Ashes* contain a very fertile salt, and are the best manure for cold lands, if kept dry, that the rains doth not wash away their salt." (*Mort. Husb.; Todd's Johnson.*)

The use of ashes may be traced to a very early age. The Romans were well acquainted with paring and burning. Cato recommends the burning of the twigs and branches of trees, and spreading them on the land. Palladius says, that soils so treated would require no other manure for five years. They also burnt their stubbles, a practice common among the Jews. The ancient Britons, according to Pliny, used to burn their wheat-straw and stubble, and spread the ashes over the soil. And Conradus Heresbachius, a German counsellor, in his *Treatise on Husbandry*, published in 1570, which was translated by George, tells us, p. 20, that "in Lombardy, they like so well the use of aslies, as they esteem it farre aboue any doung, thinking doung not meete to be used for the unholsomnesse thereof."

It is the earthy and saline matters of the burnt soils, and combustibles employed, which constitute the substance of the ashes employed in agriculture. Their use as a manure is very general in most parts of England, although many errors are usually committed in their application, and much erroneous reasoning wasted in accounting for their unsuccessful application in some districts, or their general success in others. Those usually employed for agricultural and horticultural purposes in this country are, 1. The ashes of coal; 2. Ashes of wood; 3. Peat ashes; 4. The ashes from turf, as in paring and burning; 5. The ashes of burnt clay; 6. The ashes from soap-boilers. I will remark upon these, in the order in which I have enumerated them.

1. *Coal Ashes.*—The only analysis of coal that I am acquainted with is that of earth-coal, by M. Klaproth: he found it to be composed of—

Volatile matter	62.25	=82.5
Charcoal	20.25	
Lime	02.00	=17.5
Sulphate of lime	02 05	
Oxide of iron	01.00	
Alumina	00.05	
Sand	11.05	
	100	

The combustion of the coals dissipates almost all the gaseous matters, and much of the charcoal; and the ashes, therefore, will consist almost entirely of the various earths, a small portion of charcoal, and the saline matters of which the sulphate of lime (gypsum) and lime constitute about a fourth.

The presence of these last-named substances gives to the coal-ash almost all its value as a fertilizer, for these ashes are always most beneficially applied to those crops which contain sulphate of lime in sensible quantities, such as to lucerne, sainfoin, red-clover, &c. In the garden, they are more often employed for the purpose of forming walks, and to prevent the ravages of garden-mice, than as a manure; or, when they are employed as an addition to the soil, it is generally in considerable quantities, on stiff clay soils, with the intention, by the mechanical operation of the cinders, of rendering the soil more friable and permeable by the gases of the atmosphere. As a top dressing for lucerne, red clover, sainfoin, and other grasses, there is no application superior to coal ashes. This fact was clearly proved in some comparative experiments made by Lord Albemarle, with a variety of manures, as a top dressing for sainfoin. He found coal ashes far superior in value to any other fertilizer. As a manure for gardens, it is generally employed in quantities much too large; and thence an idea has been entertained by many gardeners, that coal ashes are inimical to plants and trees. Mr. Loudon has given several experiments of this description. In these, one gardener imbedded his potted chrysanthemums, by placing a "large handful" at the bottom of each of his pots, and then was surprised that other pots, not thus partly filled, produced better plants. Another "horticultural friend" states the case of a Scotch gardener, who "coated over," for two successive years, his garden with coal ashes; and then our experimentalist, who was, doubtless, a persevering character, finding that, with this overdose of cinders, the "fruit trees did not thrive so well as he expected," actually took them up, and placed them under a "substratum of ashes, in order to lay them," as he said, "dry and comfortable." The trees of course grew worse, and were taken up. (*Gard. Mag.* vol. vi. p. 224.) It is to be lamented that such trials as these are ever brought forward; they are merely sources of erroneous conclusions, and strong proofs of the ignorance of those who have thus been wasting their master's time and property.

Mr. Loudon has, in another place (*Gard. Mag.* vol. ii. p. 406,) given some experiments of a very different character, which I shall give in his correspondent's own words:—"I sowed on the 15th of May, 1826, three rows of Swedish turnips. No. 1, was manured with well-rotted dung from an old melon bed. No. 2, with the tops of cabbages just come into bloom. No. 3, with coal ashes. They vegetated about the same time, but the row manured with the cabbage-tops seemed to suffer most from the drought; the season being hot and dry, they made little progress until the end of August, and in November they were a middling, or rather a bad crop. The row manured with coal ashes had, all long, a more luxuriant appearance than the other two. The rows were 20 yards in length, 3 feet apart, and 15 inches from plant to plant in the row. I took them up in February, and they weighed as follows:—No. 1, 78 lbs.; No. 2, 88 lbs.; No. 3, 121 lbs.; which is very much in favour of the coal ashes." It may be remarked, that sulphate of lime, which abounds in coal ashes, is found in very sensible quantities in turnips. In the garden, coal ashes are very useful when spread over the surface, to prevent the depredations of garden-mice; they cannot burrow through them; and, in the case of early sown peas, it will be found that the peas covered on the surface of the ground, with coal ashes, say a quarter, or half an inch in thickness, will be three or four days earlier than those to which the ashes have not been applied. This may be attributed to the greater heat absorbed from the sun by the black coal ashes.

Wood Ashes.—The wood of various trees, &c., has been analyzed by M. Saussure, Jun.; the following was the result (*Chem. Rec. Veg.*):—

	Parts of Ashes.
1000 parts of the dry wood of a young oak, yielded	2
1000 ditto of the bark of oak	60
1000 ditto of perfect oak wood	2
1000 ditto of poplar wood	8
1000 ditto of poplar bark	72
1000 ditto of wood of hazel	5
1000 ditto bark of ditto	62
1000 ditto wood of mulberry	7
1000 ditto bark of ditto	89
1000 ditto wood of hornbeam	6
1000 ditto bark of ditto	134
1000 ditto wood of horse-chesnut	35
1000 ditto straw of wheat	43
1000 ditto branches of the pine	15

100 parts of these ashes were found to consist of the following substances, in varying proportions. I have arranged the results in a tabular form, by which my readers will readily ascertain the composition of the ashes procured by the combustion of various woods, barks, &c.:—

	Soluble Salts.	Earthy Phosphates.	Earthy Carbonates.	Silica	Metallic Oxides.	Loss.
100 parts of ashes of young oak dry wood, contain	26.0	28.5	19.25	0.12	1.	58
Bark of ditto, ditto	7.0	4.5	63.25	0.25	1.75	22.75
Perfect oak wood, do.	38.6	4.5	32.	—	2.95	20.65
Poplar wood, ditto	—	16.75	27.	3.3	1.5	24.5
Poplar bark, ditto	6.	5.8	60.	4.	1.5	23.2
Wood of the hazel, do.	24.5	35.	8.	0.25	0.12	32.9
Bark, ditto, ditto	12.5	5.5	54.	0.25	1.75	26.
Mulberry wood, ditto (Cut in November.)	21.	2.25	56.	0.12	0.25	20.38
Bark of ditto, ditto	7.	8.5	45.	15.25	1.12	23.13
Wood of hornbeam	22.	23.	26.	0.12	2.25	26.63
Bark, ditto	4.5	4.5	59.	1.5	0.12	30.38
Wood of chesnut	9.5	—	—	—	—	—
Straw of Wheat	22.5	6.2	1.	61.5	1.	7.8
Branches of the pine	15.	—	—	—	—	—

The soluble salts of these ashes are chiefly carbonate and muriate of potash. The earthy phosphates are the phosphates of lime and magnesia (or the principal salt of bones); the earthy carbonates are those of lime (chalk,) and maghesia; silica is the pure earth of *flint*; and the oxides were those of iron and manganese.

The cultivator will readily see, by the results of these valuable investigations, the reason why wood ashes are so much superior to those from coal as a manure. The ashes from wood, he will notice, contain a very considerable proportion of the phosphates of lime and magnesia; those from the hazel, containing 35 per cent., and those from the wood of young oak 25 per cent., essential vegetable ingredients, of which the ashes from coal are entirely destitute. The phosphate of lime, it will be remembered, is the chief fertilizing constituent of bones, in which valuable manure it is invariably present, in proportion varying from 37½ per cent. in the bones of the ox, to 35 per cent. in those of the hare. Wood ashes also contain a considerable proportion of carbonate of potash, a salt which is more or less present in all vegetable substances, and for which, therefore, it must be highly serviceable as a food. The carbonate of potash, too, promotes the dissolution of dead vegetable substances, and it also, from its attraction of moisture from the atmosphere, must promote an increased supply to the soil. Wood ashes are often very judiciously added to common manure, the quality of which is much improved by the mixture. The leaves of trees, when burnt, generally produce more ashes, or potashes as they are called, (from being formerly produced by burning vegetable substances in large open pots), than the branches, and the stem of the tree the least of all; herbs produce four or five times, and shrubs three or four times as much as either. All vegetables produce more ashes if burnt when green than when they are previously dried. Davy (*Lectures*, p. 113) has given a table of the quantity of potashes furnished by the combustion of [illegible] various common vegetable substances, which [illegible] insert, as the cultivator will see [illegible] remarkable differ[illegible] by it that there is a very remarkable difference in the quantity produced by equal weights of different trees and plants.

		Parts of Potashes.
10,000 parts of the poplar produced		7
— — beach		12
— — oak		15
— — elm		39
— — vine		55
— — thistle		53
— — fern		62
— — cow thistle		196
— — beans		200
— — vetches		275
— — wormwood		730*
— — fumitory		790

Peat Ashes.—Peat ashes are made in many parts of England for the use of the farmer by burning peat in large heaps, after it has been sufficiently dried by the heat of the sun; and for grass lands and turnips they have been found a very valuable manure. They are usually applied as a top dressing. The composition of peat ashes more nearly resembles that of coal ashes than those from wood or vegetables—which is a result hardly to be expected, when we consider that the immense beds of peat, or turf, as it is sometimes called, which are dispersed over Britain, are evidently composed of the remains of vegetable substances; trunks of trees, leaves, fruits, stringy fibres, the remains of water mosses, &c. and this in some places to a depth of 15 yards. Peat ashes were analyzed by Davy, with much care: he came to the conclusion that they owe most of their fertilizing properties to the presence of gypsum (or sulphate of lime.) In the Berkshire and Wiltshire peat ashes, he discovered a considerable portion of it. The Newbury peat ashes he found to be composed of from one-fourth to one-third gypsum, and in the peat ashes of Stockbridge and Hampshire, a still larger proportion of the same substance. The other constituents of peat ashes are calcareous, aluminous, and silicious earths, with varying quantities of sulphate of potash, a little common salt, and occasionally oxide of iron especially in the red varieties of peat ashes.

"These peat ashes," said Davy, "are used as a top dressing for cultivated grasses, particularly sainfoin, clover and rye-grass. I found that they afforded considerable quantities of gypsum, and probably this substance is intimately combined as a necessary part of their woody fibre; if this be allowed, it is easy to explain the reason why it operates in such small quantities; for the whole of a clover or sanfoin crop on an acre, according to my estimation, would afford, by incineration, only three or four bushels of gypsum. In examining the soil in a field near Newbury, which was taken from below a path, near the gate, where gypsum could not have been artificially furnished, I could not detect any of this substance in it, and at the very time I collected the soil, the peat ashes were applied to the clover in the field. I have mentioned certain peats, the ashes of which afford gypsum: but it must not be inferred from this, that all peats agree with them. I have examined various peat ashes from Scotland, Ireland, Wales, and the northern and western parts of England, which contained no quantity that could be useful; and these ashes abound in silicious, aluminous earths, and in oxide of iron. Lord Charleville found in some Irish peat ashes, sulphate of potash. Vitriolic matter is usually found in peats; and if the soil or substratum is calcareous, the ultimate result is the production of gypsum. In general, when a recent potash emits a strong smell resembling that of rotten eggs (sulphuretted hydrogen,) when acted upon by vinegar, it will furnish gypsum." (*Agri. Chem.* p 336.)

In the valley of the Kennet, in Berkshire, where the peat ashes are made in very considerable quantities, and are used by the farmers as a manure for both grass and turnips, they are sold at three-pence per bushel, and are applied at the rate of 40 or 50 bushels an acre broadcast. On most grass lands there is no dressing equal to them; and on some soils, near to Hungerford, they produce the most luxuriant crops of grass, in cases where the effects of common farm-yard manure are hardly preceptible. As a manure for turnips, they answer best in wet seasons. In very dry weather, the crops growing on the ashed land are described by the farmers as putting on a "*burned*" appearance.

Peat ashes are extensively employed in Flanders as a manure; they are carefully preserved by the householders, who burn turf or peat, and are sold to the farmers by the bushel, in the same way that those of Newbury are in England. Their use is chiefly confined to clover, for which purpose they are an excellent top dressing. Mr. Radcliffe, in his *Agriculture of Flanders*, has given an analysis of these ashes, from which the farmer will see they owe nearly all their fertilizing properties to the presence of 12 per cent. of gypsum. 100 parts are composed of—

Silicious earth	32
Sulphate of lime	12
Sulphate and muriate of soda	6
Carbonate of lime	40
Oxide of iron	3
Loss	7
	100

(To be Continued.)

*Hence potash was formerly called "salt of wormwood."

Analyses of Indian Corn and Ruta Baga.

To the Editor of New England Farmer.

Dear Sir—In your last week's paper, you expressed a wish for analyses of Indian corn and of ruta baga. They are herewith enclosed—and for the purpose of comparison, potatoes are added.

100 lbs. of—	*Corn.*	*Ruta Baga.* Fresh dung.	*Potatoes.* Fresh dung.
Contain of			
Flesh-forming principles—Gluten, albumen, &c.	1.26	1.	2.07
Fat-forming principles—as Gum, sugar, starch, woody fibre, oil, &c.	88.43	13.	24.34
Water,	9.	85.	72.
Salts,	1 31	1.	1.39
	100	100	99.80
The salts are composed as follows:			
Of potash,	0.200	0.373	0.676
Soda,	.250	.165	.391
Lime,	.036	.125	.055
Magnesia,	.128	.040	.055
Alumina,	.016	.005	.008
Iron oxide,		.004	.006
Silex,	.434	.067	.011
Sulphuric acid,	.017	.127	.090
Phosphoric acid,	.224	.057	.067
Chlorine,	.008	.037	.026
	1.312	1.000	1.389

The acids and the chlorine are combined with the alkalies, metals and earths, and form salts, called sulphates, muriates, and phosphates of potash, soda, &c.

What (you wish to know,) is the *action* of the salts? So far as chemistry has yet gone, these are found combined with the *flesh*-forming principles only, and never with the fat-formers. They form a part of flesh, blood, sinews, bones, gristle. They are found in the animal body, only in combination with these tissues or in certain secretions and excretions. As the elements of the animal tissues are identical in composition with certain parts of vegetable systems, the salts perform similar parts. Rigid analysis would probably show that the salts are always proportional to the flesh-forming principles. As in the animal body, the salts form not fat, so in the vegetable they form not a part of starch, rum, sugar, wood. Essential they are to the formation of the plant, by which the fat-forming principles are produced, and equally essential to the growth of the animal body. How they act, is unknown. It is determined by chemistry, that the salts form certain definite proportions of certain parts of the body. We may infer then, that their action is, to form only the substances of which they are essential elements. If supplied in quantity greater than the body requires to form these elements, they would probably be excreted as useless. Unless then, you have some evidence that salts act on animals, as in some cases on plants, to increase bulk and developement, the position that salts exert "a greater action, in proportion to their quantity, upon the animal system, than the organized matters," requires farther proof. Now this proof chemistry expects from practised cattle-feeders and stock-raisers. The analyses above, compared with your experience, may throw some light upon the subject. With regard, I am your ob't serv't,

Sam'l L. Dana.

Lowell, Feb. 28, 1843.

☞We are truly thankful to Dr. Dana for his communication. It gives the information we asked for in some comments on Dr. Playfair's lecture, in our paper of Feb. 22, and it should be read in connection with that article. It appears from Dr. Dana's analyses, that Indian corn is the poorest, pound for pounds for making *flesh*, (as distinguished from *fat*,) of all the substances named, excepting turnips and ruta bagas; and it is but little better than these. For forming *fat*, however, it is far before others. Supposing ruta bagas to cost half as much per bushel as potatoes—and estimating the potatoes at 62 lbs. per bushel, and the ruta bagas at 56 lbs., we shall find them very nearly equal in their *flesh*-forming matters; but the ruta baga has the superiority in its *fattening* properties. Such is the chemical result; and it differs from our conjecture, that the ruta baga would be found best of all the roots for giving muscle.

We may extend our remarks upon this subject in some future number.—Ed. N. E. F.

From the New England Farmer.

Seventh Agricultural Meeting at the State House.

The President, Mr. King, in the chair.

On motion of the Hon. B. V. French, the following resolve was adopted:

Resolved, That the farmers of this Commonwealth, here assembled, and who have assembled weekly during the present session of the Legislature, for the purpose of discussing and considering subjects pertaining to agriculture, have heard with pleasure, that their distinguished fellow-laborer, Rev. Henry Colman, late Agricultural Commissioner of the Commonwealth, and as such, the Sinclair of America, intends visiting Europe the coming season. Few in our country have advocated with more zeal and eloquence the farming interests; few have collected such funds of agricultural statistics, or been so industrious in dispensing the same for the public good. Therefore, we most cheerfully recommend him to the civilities and kind attentions of European agriculturists.

And it was

Voted, That the above resolve, signed by the officers of the meeting, be communicated to Rev. Henry Colman, and that such editors of agricultural papers in this country, as may concur with us in sentiment, be requested to publish the same.

Daniel P. King, *President.*
Johnson Gardener, Benj. V. French, } *Vice Presidents.*
Allen Putnam, S. W. Cole, H. C. Merriam, Wm. Buckminister, *Secretaries.*

Dr. C. T. Jackson then resumed his remarks, saying that last week he dwelt mostly upon *organic* manures, but should this evening dwell more upon the *mineral*, though the two are closely connected, and cannot be separated.

The minerals are decomposed by acids, alcalies and earths. When thus decomposed, the plants take them up; you may with the microscope see the crystals in the sap vessels of the plants. The plant takes up the matters that come within its reach, and has not full power to expel such as are deleterious. Opium or arsenic will kill a plant if taken into it. Generally, however, the plant takes only what it needs.

Carbon, in a moist state, undergoes a slow combustion, and yields carbonic acid. The vegetable matters, during the changes which decay works in them, first become *acid*; then take oxygen from the air and from water; then putrify—then form crenates, apocrenates, &c.; then oxidation comes, and carbonic acid follows.

Animal matters first become *alkaline*, and give ammonia; then they become a brown matter, containing nitrogen. When you mix animal and vegetable matters, you form a large portion of *neutral salts*, and thus make most valuable manure. A fallen tree, in its decay kills the surrounding grass by an excess of acid; a decaying animal carcass at first kills by the excess of ammonia; but when the excess passes off, the vegetable growth is more vigorous.

Acids decompose rocks and take out from them the alkalies. The stone found in a peat-bog is always white, because the acids of the peat have taken out the alkaline coloring matters. A soil containing iron is much benefitted by an application of ashes, lime, or animal matter. The yellow color of subsoil is caused by iron. Bring this up to the surface, and by action of the air, the iron is oxidized and blackened.

Plants contain ammonia—this is a new discovery of science. But in the heart of Indian corn and of all seeds ammonia exists. There is some of this ammonia in the atmosphere, but not enough—the greater part comes from the decomposition of animal matters in the soil; and the

value of a manure is in proportion to the ammonia it will form.

(Thus far in the lecture we took a few notes; but becoming satisfied that we could do no justice to Dr. J. in an attempt to report him, we laid down the pen. He was obliged to go over so much ground in so short a time, that his statements were necessarily concise, and gave little more than results, without explaining the steps by which they were reached.

Last week we were far from confident that we gave his views correctly, and now we are less confident that we can give a true account of his positions and teachings.

The lecture was interesting and instructive. The meeting, we think, are under great obligations to Dr. J. for his willingness to spend so much time and be at so much trouble to give them information. We less regret our inability to report him, from the fact that we may hope to find the results of his analyses, and an explanation of his views, in his report upon New Hampshire, which will probably be published next summer.)

Johnson's Lectures on the application of chemistry and geology to agriculture, now being re-published in this country, Wiley & Putnam, New-York, and for sale in Boston by Little & Brown, Dr. Jackson noticed with high praise. He called it *the best* book upon agricultural subjects that has ever been published. One thing there advanced, Dr. J. said he would draw attention to, without adopting it, viz: that a strong luxuriant crop draws to itself the carbonic acid of the atmosphere; so that he who manures highly, draws to his field the carbonic acid from his neighbor's poor field; making good the scripture, that to him that hath, shall be given, and he shall have abundance.

In a few eloquent closing remarks, Dr. J. noticed the growing attention of the world to agricultural science, and the mutual aid which the practical farmer and the chemist can give to each other.

Errata.—Last week, we make Dr. J. speak of magnesia as becoming "*oxidized.*" It is an oxide in its common state:—the mistake was ours, and not Dr. J's. His statement "that in the interior of France it is found that 300 pounds of salt are as valuable as a ton of plaster," which we thought might be a slip of the tongue, was what Dr. Jackson meant to say; and he tells us that if he had gone to the extent of his authority, might have said 300 lbs. salt were found equal to 5000 of plaster.

Subject for next meeting—The Honey Bee.

Improving Meadow and Swamp Lands.

HON. DANIEL P. KNG'S STATEMENT,

To the Committee on Reclaiming Meadow Lands, for the Essex Co. Agricultural Society.

Gentlemen—I have made several experiments in improving wet meadow and peat lands, which I will, as briefly as possible, state to you.

On land which admits of ploughing, I have planted potatoes on coarse stable manure; after removing the crop, I have sowed winter rye and herds and red top seed, as late as November, and they have always grown well and given good crops. After a few years the grass will degenerate, and I have found unleached wood ashes the best application to invigorate the soil.

I have spread gravel and the accumulations under an old barn floor on a wet meadow, and sown grass seed, and the crop has been very heavy.

In 1839, I ploughed forty poles of peat meadow, and planted potatoes on coarse stable manure. I harvested in the fall sixty bushels of excellent potatoes. The next spring I again ploughed, and applied a compost of fifteen bushels of bone manure and three cart loads of loam; on this I raised a large crop of sugar beets and ruta baga; one of the former, weighing with the tops, seventeen pounds, and one of the latter, twenty five pounds. The ground appeared like a rich bed of compost, and I carted from it ten cords which I spread upon upland grass. In the fall, one cord of horse manure was ploughed in and winter rye and grass seed sown. In July, 1841, 8 bushels of rye were reaped, and soon after, a good crop of grass. In August, of the same year, a second crop of grass was cut on this piece. This year, the first crop of hay was fifty hundred to the acre, and the second, twenty.

I have drained four other pieces which were so miry that oxen could not travel over them. The peat for fuel fully pays the expense of ditching. The annual crop before my improvement was not worth a shilling per acre; it was buck horn and low bushes. This meadow has been pared with a topping knife to the depth of three and four inches, according to the depth of the wild grass and roots, then cut into squares of fifteen inches and inverted. Coarse stable manure has been wheeled on, potatoes dropped and covered with the loosest sods. Little labor is required in hoeing. The crops of potatoes have been good in quantity and excellent in quality. Till this year, when a part of the meadow was flooded by the heavy rains in June, the crop has been two hundred bushels to the acre. Cabbages and beets have also done well. After securing the crop of potatoes, I have taken off the loose toppings and used them for compost. The quantity removed is not far from sixty cords to the acre. The toughest and most rooty sods I have burned on the meadow, and spread the ashes, but the ashes so applied, have not equalled my expectations. After removing the sods, the surface was levelled with rakes, and winter rye and grass seed sown. This was on the sixteenth of November. Early in the spring, I spread on the meadow woolen waste from a carpet factory, and on a part of it, a compost of hen manure and loam. The latter produced a most luxuriant growth. The rye was partly winter killed, but what survived was rank and heavy. After reaping the rye, more than thirty hundred to the acre of grass and stubble was mowed, and another crop might have been made, but I preferred to feed it off.

The present season I have treated two parcels in the same manner except that I have sown fowl meadow with the herds grass and red top, and I have not sown rye, for I find that ordinarily the grass will be forward enough to mow the summer after sowing in the fall. I had doubts of the expediency of sowing so late as November, but my success has encouraged me to repeat the experiment. I have a compost of loam and stable manure, which I intend to spread on my reclaimed meadows. I consider them the most profitable land for grass, and the toppings removed afford a rich contribution to the barn yard, pig pen, and compost heap.

The quantity of land on which I have made experiments, exceeds three acres.

Respectfully submitted,

Daniel P. King.

Danvers, Nov. 1, 1842. *Farm. Mo. Visitor.*

Muscles as Manure.—Having often seen a request in your paper, that farmers would write to you giving their experience, and having had some experience in the article of muscles (or Mytulus) as a manure, I here give you what information I can respecting them. I have used muscles, myself, two years, as a top dressing on my mowing lands, and the result has far surpassed my most sanguine expectations.—My first experiment was with twenty-one cartloads. It was spread as follows, in heaps of six shovels full in a heap—the heaps were ten feet apart—where it remained until the next spring; and after the frost was well out of the ground it was spread, care being taken that none should remain on the spot where the heap stood. The result was as follows: I cut that season four tons of good English hay, and the year before I cut but one ton on the same piece. I will also state that there was large quantities of Roman wormwood on the land before I spread muscles on it, and it has been all killed out in this manner.

Muscle beds are found in most of our harbors, and amongst our islands on the coast. The way that we procure them in this place is by means of a scow. I live about four miles from a muscle bed. I take two men with me; we generally start on the first of the ebb tide, so as to get on to the bed before the tide leaves it; then we get out on the bed, and shovel in on both sides; we load the scow in about an hour and a half. She will carry about twenty-five cartloads.

I haul it out on my land as soon as I get it, in heaps, as before stated. The reason that I do not spread immediately is that it is so wet and lumpy, and by letting them remain over winter, the frost slacks them, and in the spring they spread like ashes. I think that muscles will do much better on clayey land than on gravelly land. I know of places on the shores of Massachusetts where a man could drive his team off on the ice to muscle beds at low water, and get muscles in the winter when he could do nothing else.

I know of a farmer about forty miles from this place, who cuts annually one hundred tons of hay; all his stock consists of one cow and two yoke of oxen. Another instance I know of, in this town, where one scow load of muscles was put on the land eighteen years ago, and has had nothing done to it since, and still cuts a good crop of hay. I have now on my land twelve scow loads ready to spread in the spring, and next fall I will write you the result. I have given you all the information in my power respecting muscles. Respectfully yours, &c.,

Boston Cul. George E. Tyler.

The Divining Rod.—The art of discovering water courses under the surface of the earth by means of a green rod newly cut from the peach, hazel or cherry-tree, has been known in Europe for several years. It is said the discovery was made in Germany, but by whom is uncertain. Until a very late period it has been considered an imposture, and ranked with the arts of magicians and other vain pretenders to mysterious powers. This opinion of the power of the "divining-rod," or "magic wand," as it has been termed, has undoubtedly arisen from the fact that in the hands of many persons the action of the rod is wholly imperceptible, while in others the attraction of the water, especially if it be near the surface and the vein large, is surprisingly great. When the wand is of a brittle nature the attractive power is so forcible as frequently to break it.

From the numerous experiments made in France, since the commencement of the present century, by Thouvenel and other men of science, the claims of the divining-rod are found to rest on well-known material powers. The art of finding water by its means is well established and promises to be of great utility to our country. The theory explaining the phenomena of the "magic wand" supposes that the water forms with the earth above it, and the fluids of the human body, *a galvanic circle.* This circle is more or less perfect, as the state and condition of the body of the operator qualifies it to be a better or worse conductor of the galvanic fluid. The human body is one of the best conductors yet discovered, and weakly or debilitated persons are said to be better conductors than persons in sound health, and the attraction is greatest when the skin is wet, particularly the hands and arms. Salt water and a weak solution of the muriatic acid are the best fluids for moistening the skin. The effect will be increased if the operator be barefoot, his feet and hands having been previously wetted with either of the aforesaid fluids; but if he have silk gloves or silk stockings on, the rod will not be suspended by an electric, or in immediate contact with an electric no attraction will be felt, and the degree of attraction varies as any substances lying between the water and the hand of the operator are more or less adapted to conduct the galvanic fluid.

Such are some of the facts stated by writers on the subject, but of the reality of the powers attributed to the "divining-rod," we now need no foreign authorities to carry conviction to every intelligent mind. We have in this city several operators; men of the most unquestionable character, whose powers have been tested by the severest scrutiny, and who have never failed to convince the most incredulous. The writer has known several stout unbelievers thrown into the most ludicrous predicament by suddenly discovering that they themselves were among the magic, and had all the powers of the best water-finders! The powers of the "magic wand" being natural powers, it only requires that the natural means be present in any individual to produce the necessary result.

Any person may discover whether or not he has the powers of a water-finder by the following experiments: Let him cut a branch of a peach or cherry tree having a fork with two twigs of length and thickness nearly equal, and slender enough to be quite flexible. If formed correctly it will nearly represent the letter Y. Let him take the small ends of the twigs, one in his right hand and one in his left, and hold it so that the main branch, where the fork begins, shall be uppermost and nearly perpendicular to the earth, but a little inclining forward. Holding it in this position, let him walk slowly and carefully over the ground where water is to be sought for; and, if the body of the operator be a good galvanic conductor, the wand, when over a vein of water that is near the surface, will be drawn forward and downward with considerable force; and if the vein be large it will point directly down to the earth. The causes of this phenomenon being natural, and invariable as the principle of gravitation, water will *always* be found nearer the surface of the earth when thus indicated by the divining-rod than in other places.—*Del. Journal.*

Farmers should plough deep, and manure well, if they wish for good crops.—The hard pan subsoil, broken up and brought to the surface, will soon become fertile and productive.

THE AMERICAN FARMER.

PUBLISHED BY SAMUEL SANDS.

Mr. Colman's Agricultural Tour in Europe.—We refer the reader to the resolutions adopted at the agricultural meeting at Boston, in regard to the contemplated work of Mr. Colman—We cannot but express our regret that so few in our vicinity have, thus far, shewn a disposition to extend to it their patronage. An opportunity is still presented of subscribing before the departure of Mr. Colman, by calling at this office, at the bookstore of Knight & Colburn, or at the office of Dr. G. B. Smith, on or before the 1st of April.

ANALYSIS OF INDIAN CORN, RUTA BAGA AND POTATOES.

The letter of Professor *Dana*, which we have copied into our paper to-day, is one of deep interest to every agriculturist; first because it contains an analysis of Corn made by him—than whom no one is more competent to make it on accurate principles—and secondly, because, as far as we are aware, it is the first that has been made of this grain, which, of all others, is of the most importance to the farming interests of our country, as it constitutes fully nine-tenths of the bread stuff consumed by them—Every one knows, and has long known, that the flour made of it is most wholesome and nutritious; but very few, indeed, were aware before, that every hundred pounds of meal contains upwards of 89 pounds of nutritive matter calculated to impart body and strength to the flesh, muscles and fat, and that upwards of 88 pounds of that consist of those principles of nutrition, of which fat is formed; nor were they previously aware, that the principles which contribute to the formation of the flesh, existed in so minute a proportion, as but a little over one and a quarter per cent. These are important facts,—facts which, if properly improved, may lead to results of deep moment in a pecuniary point of view in the feeding of stock.

By the same analysis, it will be seen, that Ruta Baga possesses but 14 per cent. of nutritive matter, and Potatoes 26.41; so that every bushel of potatoes, in the fattening, or keep of stock, is nearly the equivalent of two bushels of Ruta Baga; that one bushel of corn is worth as much as 6 1/4ths of Ruta Baga, or 3 1/2ths bushels of potatoes, in the feeding of stock, so far as the creation of *flesh* and *fat* are concerned. These conclusions, however, we think, are subject to some qualifications, upon the score of the value of distension, as we are of opinion, that it is as important to keep the stomach and intestines of an animal in a state of healthful action, as it is, that that which he may eat shall contain the properties of nutrition; and from the highly concentrated state of nutritious matter in Indian corn, it would, perhaps, be unsafe to give it in such quantity, at a time, as to fill those organs just named. If this suggestion be well founded, then, something is to be conceded, as of value, to the greater bulk, which a quantity of Ruta Baga, or Potatoes, containing the nutritive matter of any given quantity of Indian corn may possess; hence it would, therefore, not be exactly accurate, to say, that the relative value of corn, and the roots named, were so disproportionate, as would appear from the analysis.

This analysis presents one other curious fact—it is this—that while the corn gives over 88 per cent. of the *fat-forming* principles, and the potato only a little over 24 per cent.; that in the *flesh-forming* principles, the *potato* greatly exceeds the *corn*, the former yielding 2.07, whereas the latter only gives 1.26—and strange as it may seem, the ruta baga, which contains but 13 per cent of fat-forming principles, is within a fraction of being as rich in the elements of the flesh-forming principles, as is corn; their relative proportions being as 1.26 to 1.

In contemplating and reflecting upon these facts the inquisitive, observing mind will ask these questions. As the *flesh*, that is the *lean*, of animals, is the seat of the muscles, arteries, veins, bones, &c. is it consistent with an enlightened view of animal economy, to feed *young* animals upon such substances as are calculated to produce such a state of obesity, as might prevent the regular expansion and vigorous growth of the enumerated parts? Would it not be better, by adopting a compound system of feeding, that is, by mixing a *limited* quantity of meal with a *large* body of roots, to counteract the tendency of too much grain to create fat? Would it not be best in the *early* stage of fattening stock, to feed on Roots, and thus encourage the increase and enlargement of *flesh*? Would it not be conducive to the increase of *size*, if *young* animals, in a growing state, were fed upon such substances as promote the growth of *flesh* rather than *fat*? In reflecting upon these questions, and the natural conclusions to which they lead the mind, our memory recurs to a remark we heard made many years since by a shrewd yankee farmer. He was conversing upon the subject of hog raising, and observed, that he always liked his pigs to *work* for their living, until they were ten or twelve months old, that he had always found that the exercise they had to encounter, in procuring a living out of the woods, or on a marsh, was conducive to the *growth of their frames*, and that he could always make pigs, thus raised, weigh more than those of the same age and breed kept in the pen; that when the period for fattening came, there was something to fill up. Upon our asking him, whether during the grazing months he did not give them any grain, he replied that he did; but not sufficient to encourage fat, that his chief object was, in grain feeding at that time, to render them docile and fond of their home, and merely gave them grain enough to keep their hides a little silky. This was the practice of a plain farmer, who, without knowing any thing of the constituent properties of corn, had sagacity enough, from his own keen-sighted observation of effects, to found a system of feeding which would do no discredit to the profoundest philologist and most skilful chemist, and would seem to favor the views indicated by our questions.

We have thrown out these views in the hope, that the importance of the interests involved, may elicit the attention of gentlemen, whose attainments qualify them to throw light upon the subject, and in that spirit would ask such gentlemen to favor us with communications thereon.

THE FARMER'S ENCYCLOPÆDIA AND DICTIONARY OF RURAL AFFAIRS.—We acknowledge the reception of the second number of this publication, and in doing so take occasion to say, that it is eminently worthy of the patronage of the public. It is the republication of Professor Johnson's great work, which has won for its author so much favor in Europe, and is rendered infinitely more valuable to the American reader, by the labors of a practical farmer, by whom it is edited in this country, and adapted to our agriculture. In the present improving state of American husbandry, we consider it just such a work as was required by the existing spirit of inquiry abroad throughout the length and breadth of our land, and we hail its appearance as among the most auspicious events that have occurred for the farming interests within the present century. Combining, as it does, science with practice, while it is a safe text book and expositor, its lucid details of the practical operations of agriculture greatly enhance its value.

To give to our readers a just conception of the nature of the work, and a proper idea of its true character, we have transferred to our columns, to-day, the commencement of its article on ASHES, their constituent properties, and effects, both mechanical and chemical. The analysis of *Coal Ashes*, as well as the experiments named, will convince our readers that it is a most excellent meliorater of the soil, and that what we have heretofore said upon the subject, was not without authority. As coal is daily becoming more and more popular as fuel, those living in the vicinity of large towns and cities, where it may be consumed, will have another powerful manure added to the number already used by them, and thus will their facilities for improving their soils be increased.

The work may be had of Mr. *N. Hickman*, 78, Baltimore street.

PLASTER—A young farmer desires to know how he shall use Plaster. Our advice to him is, to use it freely on all his crops, our opinion being, that, at the rate of a bushel to the acre, it will do good to any crop, and the more where the land may have been previously limed.—Let him mix it in the proportion of 1 bushel to 20 cart-loads of manure, as he may be preparing his manure to be hauled out, or sow it, in that proportion, after his manure may be spread out, and previous to its being ploughed in: let him spread it on the surface of his ground after being ploughed, and then to be harrowed in: let him put it, mixed with ashes, in the proportion of 1 bushel of plaster to 5 of ashes, in his corn hills, or potato rows, graduating the quantity of the mixture to a gill for each corn hill or potato set: let him sow it in the first named proportion over his grain fields, his meadows, and his old fields, and he cannot go amiss. The range we have here marked out, is extensive, but not more so than it is calculated to do good in: and, in a word, we will say to our inquirer, that he will find it to his interest to sow it any where, where he may have growing crops, as it will attract moisture and food from the air and from the earth, and like a good nurse, dispense it to the growing plants in such proportions, and at such times, as may be required by their wants.

But while the agricultor may be providing plaster, let him not forget, that it always acts best where, as we have before premised, the land may have been previously limed.

SNOW STORM—SOWING CLOVER, LIME AND PLASTER.

It commenced snowing on Thursday, the 16th inst. about half past 11 o'clock, A. M., and continued to snow until a late hour in the night. During nearly all the time the fall of snow was heavy, accompanied by one of those old fashioned northwesters, which were wont in by-gone days to grace the advent of the day, of which Thursday was the eve. In many places, the snow-drifts were from 3 to 10 feet deep, and we should think that there was enough fell to have made an an average level depth of from 12 to 15 inches, had it not been for the drifting wind which prevailed.

Now then, as the earth in this part of the country, is covered with snow, may we not ask those of our brethren who may not have attended to it before, to proceed forthwith to sow their clover seed, as, perhaps, there is no better way to secure it a covering of earth, and consequent vegetation. We make this request, because of the solicitude we feel to see the clover culture greatly extended—a solicitude springing from our belief, that wherever a good stand of clover can be obtained, the soil in which it may be grown is in the way to lasting fertility. Let no one despair of getting such a stand, who may have it in his power to spread 10 bushels of lime, and one of plaster on his ground, per acre; for with these two minerals, even in those minute proportions, he may feel certain of success. While the lime will convert many *dead* and *inert* substances, now in the ground, into *active* manure, the plaster will attract others from the atmosphere, the rains

and the snow, seize upon and assimilate with all, and preserve them, as in a store-house, to feed out to the growing plants, as their wants may require it.

We fear that the effects of this storm have been disastrous on our coast, and that a sudden thaw, which may be expected, will cause much destruction of property on the borders of streams.

CLOVER SEED—He that sows clover seed upon his small grain, does that which will fertilize his soil, feed his stock, and enrich his pocket. If you doubt it, try the experiment, and test the truth of what we say.

DISEASES OF SHEEP—REMEDIES.

CATARRH, OR COLDS.—*Symptoms.*—Heaviness in appearance and movements, eyes watery, running at the nose, cough, and difficulty of respiration.

Remedy 1. Dissolve 1½ oz. Epsom Salts, and
1 dram Nitre
in 1 pint warm water. To this add a table-spoonful of cummin seeds in powder, and a table-spoonful of molasses; stir the whole well together, and give it in a drench when about milk warm. If the case does not yield to this dose, repeat it every other day. Change the pasture and give a gill of meal daily for a few days.

Remedy 2. Make a decoction of pine leaves, by boiling 2 oz. of leaves, freshly gathered, in a quart of water down to a pint, to this add 1 dram of Nitre and 1 gill of molasses while the tea is hot; stir the whole well together, and when milk warm give the whole to the sheep in two drenches, at intervals of six hours. If the weather be wet, or very cold, the sheep should be housed, and given hay and a little meal daily for a few days. Place a mixture of salt and tar in his manger, to lick at his pleasure, say a gill of each.

THE GOGGLES.—*Symptoms.*—In this disease the symptoms vary. Lambs affected with it sometimes run about frantic, and continue doing so until they fall from exhaustion, become deprived of the use of their limbs, and are unable to rise.

Remedy.—Bleed freely; say, take a pint of blood from the neck vein, give an ounce of Epsom salts dissolved in half a pint of warm water, then remove the sheep to a very bare pasture, which treatment will, unless the disease may have taken on the form of dropsy in the head, effect a speedy cure.

We are wonder-wounded, nay grieved—heart-grieved,—that the paragraph we penned some weeks since, expressive of our dissent from knocking faithful old horses in the head, should have thrown our friends of the Southern Planter, into such a spasm of ill humor. Had we thought, at the moment of indicting it, that the "sickly sensibility" it evinced would have proved such irritating "stuff," we most assuredly would have refrained from the enunciation of our sentiments, as, above all others, we take pride in abstaining from saying or doing any thing calculated to disturb the mental equilibrium of our fellow men, or which can, in the slightest degree, tend to cause a febrile action in the *healthful* "sensibilities" of kind friends, whom we love and adore. Therefore, our excellent friends of the Southern Planter, will be so superlatively kind, as to extend to us their forgiveness, for the fault—venial one, we hope—of having pleaded the cause of old horses. Should they grant us but this request, we will promise them not to interfere with their almost proposed plan, of raising "*cats and dogs*" for the express purpose of converting them into "*good wholesome vegetables*;" for although we should not like to partake of a mess of green peas, or a dish of cauliflower, grown in dead cats and dogs, yet we hold it, that, as there is no dispecting about tastes, these gentlemen have a perfect right, under our thrice glorious constitution, to indulge their epicurean appetites with such delicacies, whenever they may see fit, and that no one can rightfully interrupt them in the enjoyment of such delicious morceaus. The following is the article to which we allude:

"We have received a communication commenting in pretty severe terms upon what the writer was pleased to term, "the barbarity" of Mr. Drummond's plan of killing his old and useless horses, cattle, &c. for his compost pit.—In contrast with this inhuman conduct, is cited the treatment Dr. Parish, of Philadelphia, bestowed upon an old and favorite horse of his.

We hardly waited to finish this epistle, to throw it in the fire, and should not stop to notice it now, but that we have observed "stuff" of a similar character in some of the journals of the day. If any gentleman has a horse to which he has formed an attachment, in the name of common sense let him indulge his fancy in keeping and cherishing him as long as he pleases. And so, we can respect the feeling which preserves a favorite tree because it is linked with dear and cherished associations, but is this any reason for going without fire-wood, and leaving the forest untouched? We scorn the sickly sensibility, which will kill an old hard working ox for the purpose of converting him into beef, and cannot bear the idea of putting him to death for any other use. We will guarantee that the animal has more sense than the man, and, if he could be consulted, would tell you, that if you are going to kill him, it is very immaterial to him whether you convert his carcass into beef or corn and wheat. Now, if we were not afraid of shocking the delicate sensibilities of some people, we would recommend our farmers to proceed straightway to convert three-fourths of their dogs and cats into good wholesome vegetables in the way recommended by Mr. Drummond, and would even venture to urge, that there was no more impropriety in raising them for the express purpose, if they could find their *profit* in it, than there would be in raising and fattening a nice young pullet for the table."—*Planter.*

GUANO.—We visited the Conservatory a few days since, to witness the action of this manure (the dung of sea-birds, from S. America,) upon several plants. Three small rose bushes, of equal size, were taken by Mr. Teschemacher last June, and each was set in a pot; the pots of equal size, and the soil the same in quality. To the soil in two of the pots he added a tea-spoonful of guano for each. The rose bush which had no guano, is about 8 inches high. One of the others is 3 feet high, and the remaining one is 3 1-2 feet. Upon geraniums and japonicas, the effect is almost equally wonderful.

This article deserves the attention of the growers of flowers, and probably of other cultivators. There can be no question that it is more efficient in producing stem and foliage than any other application that has been made in this vicinity. And from the fact that a japonica two years from the seed, to which guano was applied, has a perfectly formed seed set, Mr. T. infers that this manure will prove good in forming fruit—for this plant, (japonica) seldom forms seeds until it is four or five years old. But its effect in producing flowers and fruit, is not yet clearly shown.

It is said that a large quantity of this guano is now in the English market. We know not what the cost generally may be, but in one instance nearly 10 dollars has been charged for 200 lbs in England. This will make it expensive—and yet if its effects shall generally be such as are now to be seen at the Conservatory, it will be economical. We advise those who may take any interest in this matter, to visit the Conservatory, and see for themselves what guano has done.—*N. E. Farmer.*

[We learn that Messrs. Birckhead & Pearce of this city have the guano for sale. We have a small parcel of the lot presented us by Messrs. Wilson & Sons, still on hand, which we will be happy to present to such of our fair friends as may wish to try it on their flowers.]

SILK MANUFACTURE.—The re-action occasioned by the failure of the excessive speculation in *morus multicaulis* in 1839, has hitherto tended to discourage and retard the extension of silk culture in the U. States. But so far as the experiment has been tried, it has proved successful in almost every section of our widely extended country. The testimony of those who have prosecuted the business for a series of years, under those advantages which, with adequate knowledge, it is in the power of all to possess, establishes the fact that silk growing yields a much better profit than ordinary agricultural occupations. The protection afforded by the Tariff, and the bounties allowed by individual States, of course contribute to this result; but so far as we can judge, there is every probability that the business will sustain itself, even when the bounty laws are repealed.

From the following statement of the bounties distributed by the State of Massachusetts, for nearly seven years, from 1836 to Oct. 1, 1842, it appears that the amount of silk made in that State during those years has been rapidly increasing.

1836,	$ 71,37
1837,	198,00
1838,	350,52
1839,	434,62
1840,	1233,58
1841,	2111,42
1842—to Oct. 1,	3351,91

[*N. Y. Jour. of Com.*

KENTUCKY BAGGING AND HEMP.—It is estimated that the steam factories in and near Kentucky will make this year two millions of yards of bagging, and that there are in the State 300 hand looms, producing annually 15,000 yards each, and an aggregate of 4,500,000 yards—together 6,500,000 yards of bagging, which will cover 1,100,000 bales of cotton; so that from 500,000 to 900,000 bales must be covered from Missouri, and from the surplus left over last year. This bagging will require 10,000,000 pounds of hemp. There will probably be 7,000,000 pounds of bale-rope made in Kentucky, which will bale 900,000 bales of cotton; so that from 700,000 to 1,100,000 bales must be baled from Missouri and the surplus left last year.

Woodford county has 60 of the 300 looms in the State, Fayette about 80, Franklin about 30, Scott about 30, Jessamine about 30, Mason about 20, all other counties about 50.

The above estimate shows that about 17,000,000 pounds of hemp will be required in Kentucky and by the steam factories near us.

Jefferson produced the past year 500 tons, Shelby 1,000, Woodford 2,000, Franklin 500, Scott 1,000, Fayette 3,000, Mason 2,500, Jessamine 1,500, Mercer & Boyle 500, all other counties 2,000; total, 14,000 tons or 27,000,000 pounds—11,000,000 more than will be required by the factories now in operation. To this surplus Missouri will add a considerable amount. If these calculations are near correct, farmers must see the necessity of water-rotting to a large amount. We may safely count upon an agency in the West before long for the purchase of water-rotted hemp for the navy. The only desideratum is a good machine for breaking the hemp, which, prepared as it is generally now, is very difficult to break out. This desideratum, we feel authorized to promise, will be supplied before long. We shall soon have it in our power also to give some valuable hints on the preparation of the hemp so that it will break as readily as the dew-rotted.—*Louisville Journal.*

On topping Corn, and on early Harvesting—Enclosed I send you an experiment in harvesting corn in 1842. As it has been a question with farmers whether corn did not fill as well when cut up and stocked when the kernel is fairly glazed as it will to stand till it is ripe: I think the fact demonstrated below is that it will not.

I selected twelve rows across the field, every way equal, containing 52 hills each, or 208 hills, in all; the first four rows of 208 hills we cut up when the corn was glazed, think the first week in September, and shocked it in small shocks where it stood till the first week in October. When harvested, it weighed 295 lbs; from the next four rows of 208 hills we cut the stalks at the usual time, say last part of August. When harvested the first week in October it weighed 319 lbs. The other four rows of 280 hills stood, stalks and all, till harvested together, and weighed 332½ lbs.

We have often cut up our corn and shocked it before, and have thought it did as well, but have never tried for ourselves and weighed it till last fall. I am now satisfied that it is better to let it stand as nature formed it.—*Mass. Ploughman.*

Value of a new Flower in England.—The sum of £670 was given last autumn for the bulb of a new Tulip, called the Citadel of Antwerp. This sum was paid by M. Vanderninck of Amsterdam, a florist and formerly a captain of the Dutch Navy, and yet the cultivator may have spent in unsuccessful competition, more than two such flowers as this would repay.—*American Traveller.*

From the S. C. Temperance Advocate.

DEEP AND SHALLOW PLOUGHING—CONTINUED.

We have previously shown that the depth of ploughing in fallowing lands must be regulated by the different circumstances of soil, subsoil, &c. The same circumstances must not only have their bearing in cultivation, but others necessarily arise, which must still change the depth in ploughing.—The objects of fallow ploughing were to improve the soil by admixture with the subsoil, and exposure to the winter or spring atmosphere: as well as to pulverize it. The last object of the three is still to be kept in view, while the other two have accomplished their ends. Science has taught us and and facts bear testimony, that exposure of subsoil to a winter atmosphere collects carbon and nitrogen, and to a summer atmosphere causes evaporation. Another item in fallowing is to turn the grass and weed seed under deep enough to prevent their coming up, which, if avoidable, should not be raised on the surface again. The chief objects in cultivation are therefore to pulverize, to kill grass or weeds, according to the nature of the plant cultivated, to hill up. If the soil is sufficiently porous, that circumstance should be kept in view. If too porous, that should have its bearing. And so in all the proportional reverses. Let us suppose, in the first place, that the fallow ploughing has turned up a turf or sod 4 or 6 inches deep. It will follow of course, that in the first ploughing for cultivation, this turf must be broken and crumbled its full depth. And to carry out the principle laid down, the plough should be constructed so to work, as not to reveree the surface again, which may be effected by a long narrow pointed shovel.—This being done as a first ploughing after planting; a question now arises—is the object of pulverizing sufficiently effected, so as to render any further labour unnecessary upon that score? In sandy or porous lands, there can be no doubt upon this question. But even in stiff clay lands, experimental facts can be adduced, made in different seasons, to prove that two ploughings 4 inches deep, will secure moisture and porosity sufficiently for the roots of corn or cotton to play as deep as ploughed that year. In stiff lands, heavy rains may cause a crust one or two inches on the surface. Now as all experienced planters know that lands may be easily too porous, and that a certain degree of solidity is necessary to protect the roots of plants from a cold atmosphere, and the burning rays of the summer's sun; when the true object is effected, an injury will be sustained, if carried too far; or to say the least, the labour is lost. Two thirds of our planters, however, will urge that clay lands, will (to use a common phrase,) cake after every heavy rain. But this error arises from the fact that the first ploughings have not been over, or little over 2 inches deep; for if those who are thus deceived would throw off the loose earth around a furrow, and measure the solid part perpendicularly, they would discover a mistake in the supposed depth. And it is certain that old stiff lands, not ploughed over 2 inches deep, will consolidate as deep after every rain. If these premises are sustained, the only remaining object as far as pulverizing is to effect any good, is to stir the surface crust, if formed. But here, at least, one half of our planters will say, the roots of corn and cotton ought to be cut to make a better production. And it is not hard to account for this corn and cotton-destroying mistake. The first ploughings, as the earth was hard and the ploughs unfitted for the purpose, have only effected a kind of scarification of a deep soil; the roots are of course confined on the surface, and if ploughed at all, must be cut, any way; it is therefore better to plough deep now than never, even for the wounded roots to have depth of soil to branch in, than to leave them uncut, to perish on the surface, for want of soil and moisture. It is argued sometimes that roots should be cut upon the principle of pruning trees, vines, &c. But if we argue upon this principle of nature, it goes to condemn the practice. We cut the top that the roots may be better enabled to sustain the remaining top. And to test the principle, let a young plant of corn be drawn up in a wet season and transplanted, and in two cases out of three an ear will never be produced of any size; yet, let the frost or an animal cut down the top when young, and the ear will be equally good.—Further, if a young tree is raised and transplanted, the more root left, the more certain and rapid the growth of the tree. If any, however, still doubt upon this question, let them make a fair experiment by ploughing from 4 to 6 inches deep, according to the soil, in the two first workings, and, after one or two inches hilling care not to cut the roots by the hoe in hilling, two acres with equal advantages otherwise, cutting the roots of one, and avoiding the other as far as practicable. And results must vary from experiments made by others; or proof will be afforded to settle the question.

If this question be established, the only remaining object in the next two ploughings (making 3 in the cultivation,) should be directed upon the plan calculated to pulverize the crust, and kill the grass most speedily and effectually. And for this, one eagle plough is worth two, (if not three,) of the widest and best shovels. What we call the eagle plough about Monticello, is not what is called the scraper, or the clumsy imitations of the eagle plough used in many sections of the State; but a plough which finishes a middle of 3½ feet, (if of equal distance) by one furrow; or a 5 feet middle by two furrows; without running over one, or one and a half inch, in depth.

This plough, if skilfully made, set and managed, will kill grass more effectually than a shovel; leave the middles in a better state for the roots to have play upon all the soil; the middles less liable to wash; by running too furrows in a middle, hill up corn or cotton, so as to cover grass in the drill; and yet not heavier in draft than a wide shovel.

Much more might be written upon the many important circumstances and principles, connected with this subject; but enough for the present object of this article; which is not only to afford the advantage of the experience of the writer to young planters, but to draw out the experience and discoveries of others, which may go to confirm true principles, and to correct any errors advanced; for the grand object of agricultural societies and papers, is or should be, to collect and treasure up the wisdom of the many, and to encourage all to further discoveries.

MONTICELLO.

Alternate Husbandry—Has been the principal means of convering one of the poorest counties of England, the county of Norfolk, into one of the most productive and wealthy. Most of this county possesses a sandy soil.—Sixty years ago summer fallows, according to Young, were common there, and fields were left in grass three years. At the close of the last century, according to the same writer, no such things as summer fallows were known, and grass was left but two years. The number of horses were lessened, ploughings were not so frequent, often but one for barley; and some trusted to mere scarifying, and succeeded well. This change of system had the effect to increase the product one-quarter and one-third. The same system is coming into operation upon our sandy soils, and with equal if not greater advantage.

To divest Milk and Butter of the Taste of Turnips, Cabbage, &c., upon which cows have fed, put into each pail of milk, when fresh drawn from the cows, one pint of boiling water. The heat of the water dispels the odor of the turnip, which becomes volatile as the temperature of the milk is increased. This has been practized and proved to be effectual, by the writer, in cases where cows have been fed two or three months in the year upon Swedish turnips. Marshall states that hot water is equally effectual, when thus applied, in removing the taste of wild onions and leeks.

A farmer of this neighborhood tells us that moles always work about 9 o'clock in the morning, and 3 o'clock in the evening, and he says that by watching their haunts at these hours they may easily be taken by means of a hoe to dig them out. He says that last spring he caught thus, in two days, over forty moles in one of his corn-fields.—*Louisville Journal.*

Lime for Lice.—We do not suffer our prejudices to extend so far as to discountenance the use of lime *as a destroyer;* and we recommend to the attention of farmers a statement made to us a few days ago by an intelligent herdsman of Marshfield.

He says he strows slaked lime under his cattle three or four times during the winter season, and by the use of this alone his cattle are entirely free from lice.

He says that for many years before he made trial of lime his cattle suffered excessively from the visitations of lice. He declared that if some friend could have given him a hint as to the efficacy of this remedy, 30 years ago, it would have saved him *more than all he has expended for newspapers from that time to the present.*

Good friends, we pass round this hint to many thousands of you, hoping it may be the means of your avoiding the losses which our friend from Marshfield has suffered.—*Mass. Ploughman.*

PRICES OF PLOWS, IMPLEMENTS, SEEDS, &c.

Messrs. R. SINCLAIR, jr. & Co. of Baltimore, have issued their catalogue of Plows, &c. &c. for the present year, containing a description of each article, and in many instances a plate thereof, with the price. We have thought we might be rendering a service to the public by giving extracts therefrom in our columns, and the publisher of the Farmer will execute any orders for articles which his friends at a distance may require.

PLOWS.

EVANS' OR CHENOWETH'S SELF-SHARPENING PLOW.

		PRICE.
6 inch.	A light one-horse seeding plough,	$4 50
7 "	A one horse corn plough,	4 75
8 "	A light two horse plough,	5 25
9 "	A two horse plough,	6 50

The construction of this plough is particularly adapted to light soils, the share is formed to be capable of being turned end for end, or upside down at pleasure—thus producing the most perfect self-sharpening principle that has yet been introduced.

WINAN'S SELF-SHARPENING PLOW.

No. 00	The smallest size, a 7 inch seed and cultivating plough	$5 00
No. 0	A one horse cultivating plow, 8 inches wide, nearly the same length as the smaller one, but has a bolder mould-board, and better adapted to sandy lands. The shares and heels of these two sizes suit each other	5 00
No. 1	A light two horse plow,	6 50
No. 2	A two horse plow, 9 inches wide,	7 00
No. 3	A two horse flushing plow	8 00
No. 4	A heavy three horse plow with sword coulter,	12 50

These plows possess the advantage of having a moveable steel point, from 15 to 24 inches long, which can be reversed, as a bevel is formed by wearing, and advanced as it becomes shorter, so as to bring into actual wear from 12 to 18 inches of a solid steel bar; by thus changing the point, the share continues to perform its work well until worn off nearly up to the mould board; whereas, without this moveable point, shares are generally rendered useless when only half-worn.

This valuable principle may be applied to any shape of mould board.

WOOD'S PLOW.

No. 21	A seed and cultivating plow, 8 inches wide, with cast shear,	4 50
Corn.	A one horse plough, with wrought iron standard and cast shear,	5 00
No. 1 A.	A light two-horse plough, 9 inches wide	6 00
No. 1½	A two horse plow, with sword coulter and cast shear, a superior flushing plow	7 00

The form of the mould board of these plows is convex, and made so as to equalize the pressure as practical use has dictated.

SINCLAIR & MOORE'S.

6 inch.	A seed plow with cast shear	4 50
7 inch.	A one horse plow, with cast shear	4 75
8 inch.	A light two horse plow, with cast shear	5 25
9 inch.	A two horse plow, with cast shear	6 50
9 inch.	A wrought shear plow,	9 00
10 inch.	A heavy 2 horse plow with wro't shear	10 00
10 inch.	A heavy 2 horse plow with sword coulter, a superior flushing plow, made both right and left handed,	12 00

DAVIS PLOWS.

6 in.	A seed plow with cast shear,	4 50
7 "	A one horse plow with cast shear,	4 75
8 "	A light two horse plow with cast shear	5 25
8 "	A light two horse plow with wrought shear	6 50
9 "	A two horse plow with cast shear	6 50
9 "	A two horse plow with wrought shear	8 50
10 "	A heavy two horse plow with cast shear	8 00
10 "	A " " " wrought "	10 00
11 "	A three horse plow " " "	12 00

The Davis and S & M plows are too generally used and known to require comment; suffice it to say, that the mould boards of them are concave, the shear plain and simple, and well adapted for almost every variety of soil.

BAR-SHARE.

No. 1	A 7 inch plow without colter	5 50

No. 1 A 7 " with wrought share and lock coulter 6 50

No. 1½ A one-horse plow, with wrought share and coulter, 7 00

No. 2 A light two horse plow, with wrought share and coulter, 8 50

No. 3 A two horse plow with wrought share and coulter, 10 00

No. 4 A three horse plow, with wrought share and coulter, a superior flushing plow, 11 00

No. 5 A heavy three horse flushing plow, with wrought share and coulter, 12 00

HILL SIDE.

No. 1 A light 2 horse plow with cast shear, changes with ease so as to throw the furrow right or left 8 00

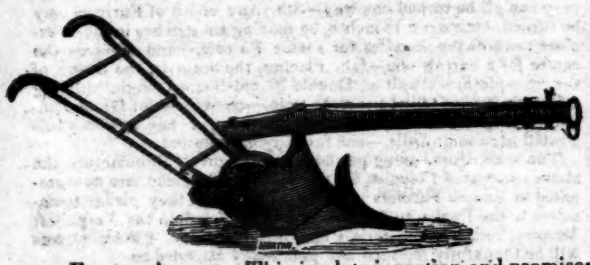
With wrought shear 10 00

No. 2 A 2 horse plow with cast shear 10 00

With wrought shears 12 00

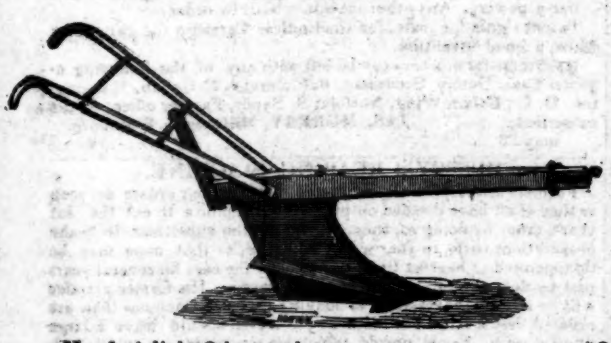
These plows perform on the level full as well as the common plow, and have the advantage of making no dead or land furrows, and plowing nearer to fences than it is possible to run a common plow.

SINCLAIR & CO'S PATENT WHEEL PLOW, No. 2,



For two horses. This is a late invention and promises fair to supercede all others for clay loam soils, (for which it is particularly adapted) has a bold convex mould board which throws a perfect furrow 14 inches wide and 7 in. deep—will perform one-fourth more work, and requires one-third less draft than ordinary plows of similar size. On top of the shear is attached a perpendicular cast iron cutter (or dolphin,) which with the shear made of composition metal will last as long as three ordinary shears; the principal novelty of this plow is the wheel which serves instead of the heel or sole piece, prevents wear of that part of the plow, and consequently keeps the sole and point on a line, causing the plow to run more steady and prevents it from running out of ground, as a plow which has worn a bevel at the point and heel (or sleigh runner shape) is inclined to do. Price . . $8 00

SUB-SOIL PLOW.



No. 1 A light 2 horse plow, $8

No. 2 A 2 horse " 10

No. 3 A 3 horse " 15

This plow does its work to admiration, leaving the subsoil finely pulverized. It is a most efficient instrument, and of admirable utility in stirring the under soil without mixing it with the upper stratum. It should follow immediately after the common plow.

Every farmer should have one.

THE GARDEN HAND PLOW

For cultivating vegetables, making drills, &c.; this implement with a man to push it will do as much work as a dozen men with hoes, leaves the ground in better order, and cultivates the vegetables more thoroughly. Price with extra irons $5 00

DOUBLE MOULD BOARD.

Two sizes; a very useful plow for draining and ploughing up potatoes at the time of gathering the crop, 6a8 50

THE BUCK-EYE IRON PLOW,

Is much used and esteemed in Ohio; they are made entirely of iron (except the handles;) several sizes, prices, each $9a15

BOSTON EAGLE PLOW,

For two horses—This plow is made with cast shears and convex mould board, and highly recommended by Mr. Bement of Albany and others as the best Northern sod Plow; there are two kinds of shears with this plow, the ordinary kind and the "Dolphin shear," or shear to which is attached a cast iron coulter or reverse sword; this principle prevents the plow from '*choaking*,' costs less, and is a valuable improvement on the ordinary coulter. Price of this plow $9 00

Shear 37½c; Dolphin do. 50c.

SHOVEL PLOW.

Wrought shear 4 50

Double shovel, wrought shears 6 00

CARY PLOWS.

No. 1 A 1 horse plow, having nearly the form of mould board as the well known Cary or Dagon plow, but has a cast iron mould board and wrought shear. The mould board is bold, opens a wide furrow, does clean work, and is very strong and simple in its construction, 5 50

No. 2 A light 2 horse plow of the same construction, 6 50

WYLEY PLOW.

There are 5 sizes of these plows, made with convex mould board and double pointed cast shears secured to the mould board by a cap; price $4 50a12 ea.

PARING or SKIM PLOWS, $12a15

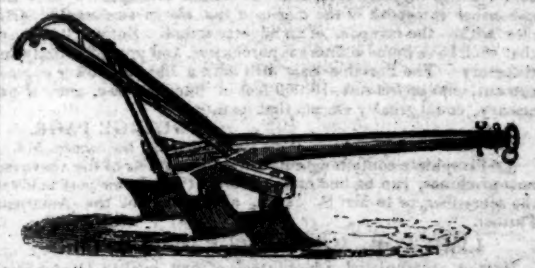
The Paring plow has been long and successfully used in England and Scotland for reclaiming or cultivating meadow or wet lands, and has been adopted and successfully used in this country. It is constructed, having a large flat shear with sharp steel cutting edges or wings on both sides, and three steel edged sword cutters at the point and at each heel of the shear. By the use of this plow, the bogs, moss, sour and wild grasses are severed from the soil and left to dry and be burned upon the ground or carried off to be converted into manure, after which crops of vegetables, grain, grass, &c. can be produced with great success.

BEACHE'S SELF-SHARPENING PLOWS,

Made with concave mould board and adapted for light or sandy soil—There are several sizes of these.

Price, each $4 50a9 00

PATENT SEEDING PLOW, OR CORN CULTIVATOR.

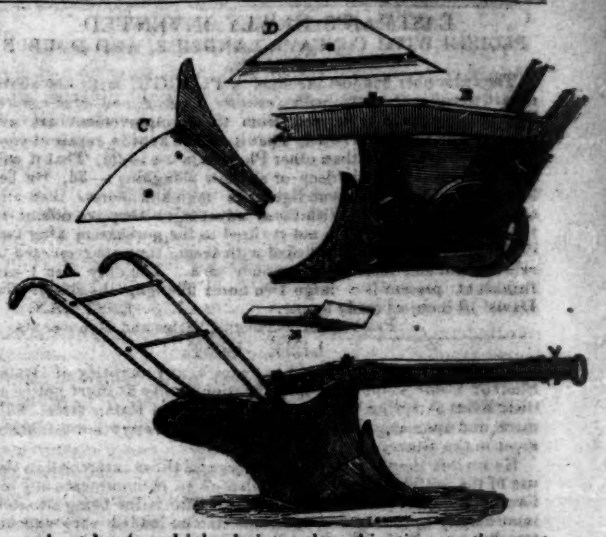


A one horse three furrow angular plow, $6 50

This plow is made very light, with reversing mould board and landsides, forming the cheapest and most simple seed plow yet introduced for seeding wheat or cultivating corn.

SINCLAIR & CO'S, PATENT WHEEL SELF-SHARPENING PLOW.

This plow like the above No. 2, has the advantage of a wheel* attached to the landside (or what may be termed a rolling landside) has a long curved high breasted mould board† which turns the furrow slice to admiration; the point and wing are in separate pieces, and are formed so as to be reversed when they become dull, thus forming a complete self-sharpening principle, and realizing to the farmer the fact that he is no longer to be taxed with blacksmith's bills for repairs; every farmer, as regards this plow is his own blacksmith; the point and shear are fastened by a plate‡ secured over them by two bolts, which serves as a clasp and protector from wear of the front edge of the mould board, and a holder for the dolphin cutter, which is put on only when plowing sod ground. The point and shear of this plow is made with either wrought or cast iron, and may be used in clean or the



roughest lands, which obviates the objection to the cast iron points and shears by Baltimore county farmers, and others whose lands are too stony and rough to authorise their using cast iron shears; the beam of this plow has two bearings on the casting; one on the mould board and the other on the back part of the landside, and so attached that it can be thrown to or from the land in a moment.

Price with cast point and shear, $10 00

Price with wrought " " 12 00

*See figure B. †See figure A. ‡ See figures E. and D.

BALTIMORE MARKET.

Hogs.—Live Hogs have been very scarce throughout the week and have advanced considerably in price. We note sales early in the week at $3,50 per 100 lbs. and the only parcel now in market is held at $5. The receipts of killed Hogs by wagons are also very limited and the sales during the week have been generally at $4,25 per 100 lbs.

Cotton.—We note sales this week of 100 bales Upland at 6 5 8 cts. 30 bales Louisiana at 7¼ cts, 20 bales Georgia at 7 cts, and 40 bales Alabama at 7¼ cts.

Cloverseed.—Sales of strictly prime Cloverseed continue to be made from store at $3,75. We quote as before, fair to strictly prime quality at $3,50 to $3,75 per bushel.

Flax seed.—Sales of some considerable parcels have been made this week at $1,25 per bushel. Holders generally however ask higher.

Timothy seed.—A sale of a parcel of inferior quality was made a day or two since at $1,87½. We quote the range for good quality at $2a2,25 per bushel.

Molasses.—We note sales of 180 hhds, superior Matanzas at 19 cts. Sales of New Orleans, in bbls, at 21½a22 cts—holders ask 23 cents. At auction on Tuesday 36 hhds, and 55 bbls, New Orleans were sold at 21½ cents.

Plaster.—Sales to-day at $4a4,25 per ton.

Rice.—We note sales of 100 casks at $2,25a2,31 per 100 lbs. for a good article.

Sugars.—We note moderate sales of New Orleans, fair good, at $5,25. At auction on Tuesday, 225 hhds, New Orleans were sold at $5a5,55. There is very little now in first hands.

Tobacco.—There has been very little done in Maryland Tobacco this week. There are no vessels in port loading Tobacco, and shippers are therefore indifferent about purchasing. The quantity of good and fine on hand,—the only sorts now inquired for,—is very small, while common and inferior sorts are abundant, but are not wanted except at lower prices than holders are willing accept. We continue former quotations, viz: inferior and common Maryland $2,50a3,50; middling to good $4a6, good $6,50a8; and fine $8a12. There is some little demand for good and fine Ohio for the French market, but the transactions are limited. We continue to quote common to middling $3a4,50; good $5a6; fine red and wrappery $6,50a10; fine yellow $7,50a10; and extra wrappery $11 a13. The inspections of the week comprise 158 hhds Maryland; 60 hhds Ohio; and 32 hhds Kentucky—total 250 hhds.

Wool.—A sale of 10,000 lbs. half and three quarters blood Merino was made in the early part of the week at 27 cents on time. We note a sale also of a parcel of common and finer grade mixed at 20 cents. In other qualities we are not advised of any transactions, and the quotations for the different grades are only nominal. The stock of Wool in market is not heavy, but is fully adequate to the demand.

Cattle—250 head offered on the 20th, ane all sold at $2 25 to 3 25 per 100lbs on the hoof, equal to 4 50a6 net, as in quality, a slight advande on last week's prices.

Flour—Howard st. $3 75 from store; demand not large—wagon price 3 62½. City Mills, nominal, 3 87½.

Grain—Wheat, receipts almost entirely suspended—We quote nominally 75a80 for good to best Md. red—Corn, white 46c. yellow 47, sales—Oats are worth 22a23c.

EASTMAN'S NEWLY INVENTED PLOUGH WITH CONCAVE LANDSIDE, AND DOUBLE SHARE.

The subscriber has just invented a PLOUGH, with the above named peculiarities, viz: *with a concave Landside and double share.* The advantages to be derived from these improvements are expected to be as follows:—1st, That it will be kept in repair at considerable less expense than other Ploughs in use:—2d, That it will run more level either in deep or shallow ploughing:—3d, He believes that it will run much lighter to man and horses than any other Plough in use. With these advantages they are offered to the public, and if they are not realized to the purchasers after two days use, or they are not satisfied with them, they are requested to return them and receive their money back. The only size I can furnish at present is a large two horse Plough, the size of the Davis' 10 inch, as made by me. J. S. EASTMAN,

Pratt street, between Charles and Hanover sts.

LIME—LIME.

The subscriber is prepared to furnish any quantity of Oyster Shell or Stone Lime of a very superior quality at short notice at their Kilns at Spring Garden, near the foot of Eutaw street Baltimore, and upon as good terms as can be had at any other establishment in the State.

He invites the attention of farmers and those interested in the use of the article, and would be pleased to communicate any information either verbally by or letter. The Kilns being situated immediately upon the water, vessels can be loaded very expeditiously. N.B. Wood received in payment at market price.

ap. 22 3m E. J COOPER.

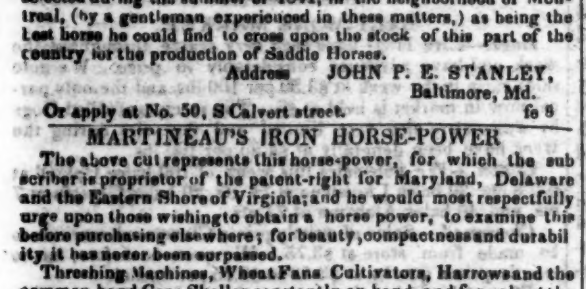
FOR SALE, THE CELEBRATED CANADIAN STALLION MINGO CHIEF.

MINGO CHIEF was five years old last spring, near 15 hands high, of a rich brown colour, perfectly formed for speed and action, goes all gaits naturally, and is very fast under the saddle. The Sire of Mingo Chief (grandsire of the famous trotting-horse Beppo, and many other celebrated trotters and rackers;) has racked his mile in 2—30. The dam of Mingo Chief was pure Canadian, and could trot a mile in 3 minutes without training. Mingo-Chief was selected during the summer of 1841, in the neighborhood of Montreal, (by a gentleman experienced in these matters,) as being the best horse he could find to cross upon the stock of this part of the country for the production of Saddle Horses.

Address JOHN P. E. STANLEY, Baltimore, Md.

Or apply at No. 50, S Calvert street. fe 8

MARTINEAU'S IRON HORSE-POWER



The above cut represents this horse-power, for which the subscriber is proprietor of the patent-right for Maryland, Delaware and the Eastern Shore of Virginia; and he would most respectfully urge upon those wishing to obtain a horse power, to examine this before purchasing elsewhere; for beauty, compactness and durability it has never been surpassed.

Threshing Machines, Wheat Fans Cultivators, Harrows and the common hand Corn Sheller constantly on hand, and for sale at the lowest prices.

Agricultural Implements of any peculiar model made to order as the shortest notice.

Castings for all kinds of ploughs, constantly on hand by the pound or ton. A liberal discount will be made to country merchants who purchase to sell again.

Mr. Hussey manufactures his reaping machines at this establishment. R. B. CHENOWETH,

corner of Front & Ploughman sts. near Baltimore st. Bridge, or No 20 Pratt street. Baltimore, mar 31, 1841

STANDISH'S AMERICAN GLOBES.

The subscriber has been appointed agent for the sale of these useful and beautiful articles, they are in setts or pairs of three sizes 12, 10, and 6 inch.

THE TERRESTRIAL GLOBES,

Exhibit the boundaries of Empires, Kingdoms, and States, as they were settled and laid down: comprising also the recent discoveries of Perry, Burrows, and Ross in the Arctic Regions, and those of Denham, Clapperton, the Landers in Africa together with exploring voyages elsewhere.

THE 12 INCH CELESTIAL GLOBE,

Is compiled from the works of the most celebrated Astronomers, and the transactions of the Astronomical Society of London. It contains the new constellations—all the known stars to the ninth magnitude, each star is numbered or otherwise designated according to the most approved Astronomical tables, with their location corrected from the late observations of the younger Herschal, the Nebulæ, the variable, double, triple and quadruple Stars are also laid down. The 10 inch Celestial globe contains all the stars to the sixth magnitude, numbered as above, the 6 inch. Do. to the fifth Do.

Price of the 12 inch. per pair, with strong apple-tree stands, $18,00
" Ten inch. Do Do Do 14,00
" Six Do. Do Do Do 7,00

The above described globes have invariably taken premiums wherever they have been exhibited for competition; the engraving is executed in a very superior style: they will be forwarded to any part of the United States, carefully packed by applying to the manufacturer Z. STANDISH, Albany, N. Y., or his agent, the subscriber at Baltimore.

March 1, S. SANDS.

FOR SALE—SHEEP AND HOGS.

Two Bucks, NEW LEICESTER breed, 1 year old this coming spring—and one Ewe, same breed, 2 years old. Also, 2 pairs of SOUTH DOWN Sheep, about 2 years old. Price for the Rams, $20—for the Ewes, $15.

Also, 2 very super or SOWS, of the pure BERKSHIRE breed, selected for breeders, one 7, the other 9 mos. old, just been put to Lemuel's imported boar Prince. Price $15 each. Apply to

Jan. 11 S. SANDS.

BENTLEY'S AGRICLTURAL STEAM GENERATOR

MANUFACTURED BY BENTLEY, RANDALL & Co.,

Manufacturers of *Bentley's Convoluted Steam Boilers*, Baltimore, Md. for steaming Corn Stalks, Hay, Potatoes, Boiling water, &c. It is also highly recommended to Tanners for steaming Leaches, also for various manufacturing and mechanical purposes, where steam or large quantities of hot water is required. This article is made wholly of iron, and was got up expressly to meet the wants of the Agricultural community, and it is confidently believed that for simplicity, durability, economy in money, fuel, time, and room combined its equal has not been offered to the public. It possesses all the principles of the most approved Tubular Locomotive Boilers, for saving of fuel, while the construction is such that one of equal size, strength and durability that has heretofore cost $100, or more, is now offered at $45. It is operated equally well with Anthracite coal as with wood, and can be removed by two persons at pleasure.—Prices No. 1 $45, considered of capacity enough for ordinary Farm purposes; No. 2 $60, No. 3 $75.

BENTLEY, RANDALL & Co.

McCausland's Brewery, Holliday, st. near Pleasant.

We have the liberty of referring to the following gentlemen, viz:—David Barnum, Esq City Hotel; Captain Jackson, warden of the Maryland Penitentiary, and Doct. Robt Dorsey of Edw., where they can be seen in operation.

Agents, J. F. Callan, Esq. Washington City; Capt. John Brooks, Upper Marlboro', Prince Georges' Co. Md. where samples can be seen. For numerous testimonials in favor of the above call on the manufacturers or their agents.

N. B. B. R. & Co., are also agents for Murray's Corn and Cob Crushers. Balto. Md., Dec. 1842.

de. 7

AGRICULTURAL MACHINERY & IMPLEMENTS.

The subscriber begs leave to assure the public that he is prepared to execute orders for any of his agricultural or other machinery or implements with promptness. His machinery is so well known that it is unnecessary to describe the various kinds, but merely annex names and prices:

Portable Saw Mill with 12 ft. carriage, and 24 ft. ways and 4 ft. saw,	$300
Extra saws for shingles, with 3 pair of head blocks,	$125
Post Morticing Auger,	15
Bands,	10
Horse Power of great strength,	200
Corn and Cob Crusher, wt. 600 lb.	65
Thrashing Machine, wt. 300 lb.	75
Corn Planter, wt. 100 lb.	25
Thrashing Machine, wt. 600 lb.	150
Grist Mill, 2½ ft. cologne stones,	150
Do. 3 ft. do.	175
Belts for the same,	15
Post Auger, wt. 15 lbs.	5
Tobacco Press complete, portable,	85
ortable Steam Engine, with portable Saw Mill and cutting off Saw,	3500
Large Sawing and Planing Machine with cutting off saw, or cross cutting for large establishments,	1100
If made of iron,	3000
Large Boring and Morticing machine for large establishments	150
Tenoning Machine	200
Vertical Saw	125
Small Morticing Machine, suitable for carpenters,	25

All of which articles are made in the most superior style of workmanship, of the best materials, and warranted to answer the purposes for which they are intended. It cannot be expected that the subscriber can speak of the merits of the above enumerated articles within the compass of an advertisement. Suffice it to say, that each have found numerous purchasers, and proved entirely satisfactory. The Portable Saw Mill with a 10-horse power engine, can cut, *with perfect ease*, 10,000 feet of lumber a day, and, if necessary, could greatly exceed that quantity.

GEORGE PAGE,

West Baltimortreet, Baltimore, Md.

☞Pamphlets containing cuts with descriptions of the above named machines, can be had on application (if by letter post paid) to the subscriber, or to Mr. S. Sands, at the office of the American Farmer. sep 1 tf

LIME FOR AGRICULTURAL PURPOSES.

Having accumulated a large stock of first quality Oyster Shell Lime, at my kilns on the Potomac River, I beg leave to say to the Farmers and Planters generally, and more especially to those who are anxious to improve their lands, and have been deterred from doing so by the scarcity of money and low prices of their produce, that I will sell them lime, delivered on board of vessels at the kilns, either at Lancaster's Tide Mill, near the mouth of the Wicomico River; Lower Cedar Point, or Pickewaxin Creek, at 6¼ Cents per bushel, payable March 1st, 1844, (if ordered, deliverable between this date and 1st of August next,) or I will deliver it on the above terms, charging in addition the customary freight, which must in all cases be cash. Orders addressed to me, at *Milton Hill Post Office, Charles County, Md.*, will receive prompt attention from WM. M. DOWNING.

ja 25 6m

PLOUGHS.

WITHEROW & PEIRCE'S PATENT CYCLOIDAL PLOUGHS,

With wrought iron shares and steel cutters, to which the Baltimore County Agricultural Society awarded the premium for the best furrow plough, at their ploughing match in November last.

For sale by ABRAHAM BUCKWALTER, 277 West Baltimore street Baltimore.

P. A. & S. SMALL, York, Pennsylvania.

And by the subscriber in Gettysburg, Adams Co. Pa.

S. WITHEROW.

The subscriber also proposes to sell on reasonable terms, Shop rights, Township, County, or State rights, to make and vend the above ploughs. S. W.

feb. 1 7t*

TO FARMERS.

The subscriber has for sale at his Plaster and Bone Mill on Hughes street, south side of the Basin, GROUND PLASTER, GROUND BONES, OYSTER SHELL & STONE LIME, and LEACHED ASHES, all of the best quality for agricultural purposes, and at prices to suit the times.

Vessels loading at his wharf with any of the above articles, will not be subject to charges for dockage or wharfage

fe 23 WM. TREGO, Baltimore.

BARNABY & MOOERS' PATENT SIDE-HILL & LEVEL LAND PLOUGH.

To which was been awarded the following and Several other Premiums, viz.—By the American Institute, at their Ploughing Match at Newark, N. J. 1842, the First Premium, a Silver Cup—and at their Annual Ploughing-Match for 1841, at Sing Sing, N.Y. a Gold Medal for the best work done, lightest draught, and best principle of construction.—answering for "general purposes." The N. York State Agricultural Society, awarded it an Extra Premium of $50, at their Annual Ploughing-Match at Syracuse for 1841.

The following are its advantages over the Common Plough, viz.—1st. Ease of Draught—2d. Perfection of Work—3d. Strength and Durability—4th. All Dead Furrows may be prevented, as the Furrows can all be turned one way—5th. Any width of Furrows may be turned, between 8 18inches, by moving the catches in the cross-piece towards the handles for a wide Furrow,—and towards the centre for a narrow one—6th. Placing the beam in the centre of the cross-piece, makes it a "Double Mould-Board Plough," turning a Furrow both ways at the same time,—answering for Green-Ridging, Ploughing between Corn and Potatoes, or any any crop cultivated in rows or drills,—and for Digging Potatoes.

The subscribers having purchased the Right to Manufacture the above celebrated Ploughs, for the State of Maryland, are now prepared to furnish Farmers with the same,—and they pledge themselves to the Public, to manufacture this Plough in the Very Best Manner, both as to materials and workmanship. ☞All Orders will be thankfully received and punctually attended to.

☞Price as Follows, (adding Transportation.)—No. 2, 45lb. at $7. No. 3, wt. 70 lbs. $10—No. 4, 80 lbs. $11—No. 5, 90 lbs. $12. Extra edge, 50 Cents. For Colter, if added, laid with steel, $1,50. Wheel, $1,50. Shin Pieces, 12½ Cents.

DENMEADS & DANIELS, corner Monument and North-sts. who having purchased Mott & Co's interest, are now sole owners.

B. H. WILSON, No. 52, Calvert st. 1 door below Lombard, is Agent for the sale of the above Plough. Baltimore, Nov 23, 1842

MILLWRIGHTING, PATTERN & MACHINE MAKING

By the subscriber, York, near Light st. Baltimore, who is prepared to execute orders in the above branches of business at the shortest notice, and warrants all mills, &c. planned and executed by him to operate well.

Murray's Corn and Cob Crushers for hand power	$25
Do. by horse power, from 6 to 12 bushels per hour,	35 to 40
Corn Shellers, shelling from 30 to 300 bushels an hour,	15 to 75
Portable and Stationary Horse Powers	75 to 150
Self-sharpening hand Mills, a superior article,	12 to 20
Cylinder Straw and Oat cutters, 2 knives,	20 a 35

Mill, carry log, and other Screws, 2 small Steam Engines 3 to 4 horse power. Any other machines built to order.

Patent rights for sale for the Endless Carriage for gang Saw Mills, a good invention.

☞Orders for crushers can be left with any of the following agents: Thos. Denny, Seedsman, Baltimore; J. F Callan, Washington, D. C; Calvin Wing, Norfolk; S. Sands, Farmer office; or the subscriber, JAS. MURRAY, Millwright, Baltimore.

may 28 1y

HUSSEY'S REAPING MACHINE.

Farmers are respectfully requested to send their orders as soon as they shall have decided on procuring machines to cut the next year's crop: by doing so, they will enable the subscriber to make preparations early in year with confidence, so that none may be disappointed at harvest time, as has been the case for several years past by delaying to apply for them in season. His former practice will be steadily adhered to of making no more machines than are ordered, lest a failure of the next years crop should leave a large number on his hands, unsold, which his circumstances will not allow. It is hoped that the great success which has attended the machines made for the last harvest will remove every doubt of their great value. Several persons have cut as high as 20 acres in a day with the last improved machines, while one gentleman with one of the old machines cut his entire crop of 72 acres in less than five days, without having a cradle in the field.

The greatest objection ever made to the machine was its heavy bearing on the shaft horse; this has been entirely removed by adding a pair of forward wheels to support the front of the machine, and a driver's seat at an extra expense of 20 dollars.

CORN & COB CRUSHER.

The subscriber's Corn & Cob crusher which obtained the first premium over several competitors at the late Fair of the N. York State Agricultural Society held at Albany, N. Y. and is so highly recommended in the public prints, by farmers who have used them, will be kept constantly on hand for sale.

no 9 OBED HUSSEY

FOR SALE.

A handsome thorough bred DURHAM BULL, about 6 or 7 months old, from very superior stock. Price $65, deliverable in Baltimore—Apply to SAM. SANDS.

Jan. 18.